



Management Responses: Current Efforts and Key Challenges: Guam

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Resources

Recorded Bleaching Events on Guam

- 1994¹:
 - 1st regional bleaching event noted on Guam since UOGML established in 1970
 - 68% of surveyed taxa bleached on Guam (51 of 75)
 - Considerable inter-specific variation in bleaching response
 - Little mortality
 - Not associated with above-average sea surface temperatures
- 1996:
 - Similar bleaching response among *Acropora* species as in 1994²
 - Little mortality, except for localized die-off on Piti Reef Flat due to extreme tidal conditions³

¹Paulay and Benayahu, 1999; ²Paulay, unpublished data; ³Davis, pers. obs.

Other Major Regional Events

- 1992¹:
 - Majuro: 1st bleaching event recorded in Micronesia
 - 15 of 25 surveyed taxa bleached
 - 99% mortality of *Acropora*
 - Associated with human population density
- 1998²:
 - Palau: 1/3 of all corals affected; 90-99% mortality of *Acropora* species on outer ocean-facing slopes
 - Yap: 20% of corals (wide variety of species) bleached to 20m of depth

¹Paulay and Benayahu, 1999; ²Wilkinson, 2000

Current Efforts

- Address anthropogenic stresses on coral reefs
 - **Overfishing:** established 5 marine preserves; increasing enforcement efforts (new vehicles, prosecutor, new equipment)



Current Efforts

- **Land-based sources of pollution:** watershed restoration (tree planting, urban forestry pilot project), better enforcement of soil & erosion control measures, new draft Seashore Reserve Plan

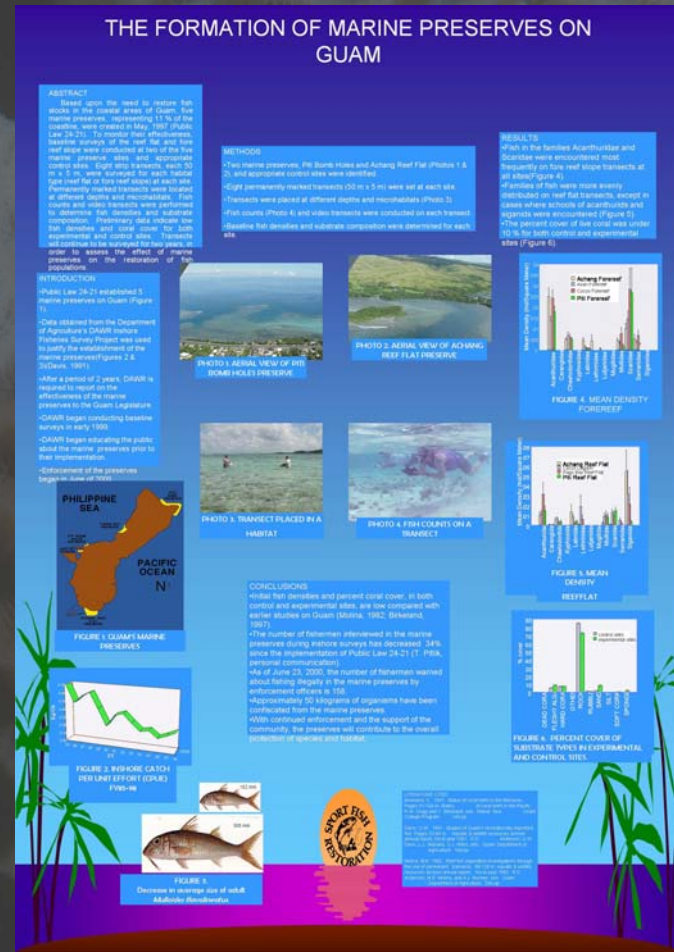


June 18-20, 2003

Coral Reefs, Climate, & Coral Bleaching

Current Efforts

- Outreach and education efforts
 - Development of posters, pamphlets, PSAs, videos, etc. addressing the importance of coral reefs and ways to better protect them



Current Efforts

- Campaign against arson / wildland fires



This land
belongs to
us too

Stop wildland arson from
destroying Guam



THIS LAND BELONGS TO US TOO

Stop Wildland Arson



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Challenges

Marine Preserve Establishment Procedure

- Develop proposal / government review 4 yrs
- 1st set of 3 hearings (2,102 total comments) 4 yrs
- 2nd set of 3 hearings (6,044 total comments) 4 yrs
- Submitted to and passed at legislature 2.5 yrs
- 5 preserves established after 14.5 yrs
- Amend penalties and educate public 1.5 yrs



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